

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A method for processing a p-code file, comprising:

analyzing p-code methods within said p-code file by a computer to determine a resource utilization for the p-code methods;

identifying one or more analyzed p-code methods that have a resource utilization parameter above a threshold level;

annotating said identified p-code methods to be compiled, said annotating comprising inserting an in-line priority level hint for each annotated p-code method, said priority level hints being hierarchically-related and collectively representing a hierarchical order, said priority level hints enabling preferential processing of said annotated p-code methods in a hierarchical manner corresponding to said hierarchical order of said priority level hints, wherein said annotating comprises selectively setting each of a plurality of normally unused bits within a method access flag field of an identified class file, wherein said unused bits are selectively set to define thereby said priority level hint of a respective annotated method;

replacing one or more lines of instructions in the p-code file with compiled code for the identified-annotated p-code methods; and

communicating the p-code file including compiled code for the annotated p-code methods via a network to a target environment for execution of the compiled code for the annotated p-code methods and interpretation of uncompiled instructions in the communicated p-code file; and

managing storage of the annotated p-code methods in a cache memory according to usage statistics, code size, and frequency of execution of the annotated p-code methods.

2. (Canceled)

3. (Previously Presented) The method of claim 1, wherein:

said p-code file comprises an application for processing by a virtual machine (VM) just-in-time (JIT) compiler.

4. (Canceled)

5. (Previously Presented) The method of claim 1, further comprising providing

said priority level hints as a separate file.

6. (Previously Presented) The method of claim 1, wherein:

said resource utilization parameter comprises at least one of a method execution time, a frequency of method invocation, a number of instructions and a use of loop structures.

7. (Previously Presented) The method of claim 1, wherein:

said resource utilization parameter comprises at least one of an execution time parameter, an input/output utilization parameter and a processor utilization parameter.

8-10. (Canceled)

11. (Previously Presented) The method of claim 1, wherein:

each identified p-code method is associated with one of a plurality of priority levels,
said priority level hints being indicative of respective priority levels.

12. (Currently Amended) The method of claim 3, further comprising: selectively pre-
compiling portions of said p-code file that are designated by the in-line priority level hints.

13. (Previously Presented) The method of claim 12, wherein: said precompiled portion of
said application file is included within a virtual machine.

14-33. (Canceled)

34. (Currently Amended) The method of claim 1, further comprising managing
storage of the p-code methods in a cache memory according to the hierarchical order.

35. (Currently Amended) A computer-readable medium storing computer-executable
instructions that, when executed, cause a computer to perform a method for processing a p-code
file comprising:

analyzing p-code methods within said p-code file by the computer to determine a
resource utilization for the p-code methods;

identifying one or more analyzed p-code methods that have a resource utilization
parameter above a threshold level;

annotating said identified p-code methods to be compiled, said annotating comprising
inserting an in-line priority level hint for each annotated p-code method, said priority level

hints being hierarchically-related and collectively representing a hierarchical order, said priority level hints enabling preferential processing of said annotated p-code methods in a hierarchical manner corresponding to said hierarchical order of said priority level hints, wherein said annotating comprises selectively setting each of a plurality of normally unused bits within a method access flag field of an identified class file, wherein said unused bits are selectively set to define thereby said priority level hint of a respective annotated method;

replacing one or more lines of instructions in the p-code file with compiled code for the identified annotated p-code methods; ~~and~~

communicating the p-code file including compiled code for the annotated p-code methods via a network to a target environment for execution of the compiled code for the annotated p-code methods and interpretation of uncompiled instructions in the communicated p-code file; and

managing storage of the annotated p-code methods in a cache memory according to usage statistics, code size, and frequency of execution of the annotated p-code methods.

36. (Previously Presented) The computer-readable medium of claim 35, further storing computer-executable instructions that, when executed, cause the computer to provide said priority level hints as a separate file.

37. (Previously Presented) The computer-readable medium of claim 35, wherein: said resource utilization parameter comprises at least one of a method execution time, a frequency of method invocation, a number of instructions and a use of loop structures.

38. (Previously Presented) The computer-readable medium of claim 35, wherein:

said resource utilization parameter comprises at least one of an execution time parameter, an input/output utilization parameter and a processor utilization parameter.

39. (Cancelled)

40. (Previously Presented) The computer-readable medium of claim 35, wherein:
each identified p-code method is associated with one of a plurality of priority levels,
said priority level hints being indicative of respective priority levels.

41. (Currently Amended) The computer-readable medium of claim 35, further storing
computer-executable instructions that, when executed, cause the computer to perform the
following:

selectively pre-compiling portions of said p-code file that are designated by the in-line
priority level hints.

42. (Cancelled)

43. (Currently Amended) The computer-readable medium of claim 35, further
storing computer-executable instructions that, when executed, cause the computer to perform
the following:

managing storage of the p-code methods in a cache memory according to the
hierarchical order.

44. (Currently Amended) An apparatus comprising:

a processor; and

a memory storing computer-executable instructions that, when executed, cause the apparatus to:

analyze p-code methods within ~~said a~~ p-code file by the computer to determine a resource utilization for the p-code methods;

identify one or more analyzed p-code methods that have a resource utilization parameter above a threshold level;

annotate said identified p-code methods to be compiled, said annotating comprising inserting an in-line priority level hint for each annotated p-code method, said priority level hints being hierarchically-related and collectively representing a hierarchical order, said priority level hints enabling preferential processing of said annotated p-code methods in a hierarchical manner corresponding to said hierarchical order of said priority level hints, wherein said annotating comprises selectively setting each of a plurality of normally unused bits within a method access flag field of an identified class file, wherein said unused bits are selectively set to define thereby said priority level hint of a respective annotated method;

replace one or more lines of instructions in the p-code file with compiled code for the ~~identified-annotated~~ p-code methods; and

communicate the p-code file including compiled code for the annotated p-code methods via a network to a target environment for execution of the compiled code for the annotated p-code methods and interpretation of uncompiled instructions in the communicated p-code file; and

managing storage of the annotated p-code methods in a cache memory according to usage statistics, code size, and frequency of execution of the annotated p-code methods.

45. (Cancelled)

46. (Previously Presented) The apparatus of claim 44, wherein each identified p-code method is associated with one of a plurality of priority levels, said priority level hints being indicative of respective priority levels.

47. (Currently Amended) The apparatus of claim 44, wherein the computer-executable instructions cause the apparatus to selectively pre-compile portions of said p-code file that are designated by the in-line priority level hints.

48. (Previously Presented) The apparatus of claim 44, wherein the computer-executable instructions cause the apparatus to manage storage of the p-code methods in a cache memory according to the hierarchical order.